

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CASEY PRINDIVILLE

Appeal 2007-0707
Application 10/799,468
Technology Center 1700

Decided: February 16, 2007

Before EDWARD C. KIMLIN, CHUNG K. PAK, and
CHARLES F. WARREN, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 21-36. Claim 21 is illustrative:

21. In semiconductor manufacture, an apparatus for attaching an adhesive-film strip, supplied from a length of adhesive film that comprises an adhesive portion and a coverlay portion adhering to the adhesive portion, to a support element, the apparatus comprising:

a support-element-feeder portion situated and configured to provide a support element;

an adhesive-film-attachment portion comprising a displaceable block;

a cutting blade situated relative to the block;

an adhesive-film-drive mechanism situated and configured to advance the length of adhesive film to the adhesive-film-attachment portion to place a desired portion of the adhesive film on the block; and

a coverlay-removal mechanism coupled to the adhesive-film-drive mechanism and configured to remove the coverlay portion from the desired portion of the adhesive film in synchrony with the adhesive-film-drive mechanism placing the desired portion of the adhesive film on the block;

wherein displacement of the block a first distance causes the cutting blade to cut the adhesive-film strip from the length of adhesive film, and displacement of the block a second distance applies the cut adhesive-film strip to the support element provided by the support-element-feeder portion.

The Examiner relies upon the following references as evidence of obviousness:

| | | |
|----------------------------|--------------|---------------|
| Wroblewski | US 3,788,572 | Jan. 29, 1974 |
| Sakumoto | US 4,933,219 | Jun. 12, 1990 |
| Tsukagoshi (as translated) | JP 11-123471 | May 1999 |
| VanNortwick | US 6,025,212 | Feb. 15, 2000 |
| Saito | US 6,080,263 | Jun. 27, 2000 |

Appellant's claimed invention is directed to an apparatus for applying an adhesive-film strip comprising a coverlay to a support element in the manufacture of a semiconductor. The apparatus comprises a coverlay-removal mechanism, a displaceable block for attaching the adhesive film,

and a cutting blade situated relative to the block. The block is displaced a first distance to cause the cutting blade to cut the adhesive-film strip and is displaced a second distance to apply the cut strip to the support element.

Claims 21-31 and 35-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakumoto in view of Saito, VanNortwick, and Tsukagoshi. Claims 32-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the stated combination of references further in view of Wroblewski.

Appellant presents separate arguments only for claims 22-23, as a group, and claim 35. Accordingly, claims 21, 24-34 and 36 stand or fall together.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in complete agreement with the Examiner's reasoned analysis and application of the prior art, as well as his cogent and thorough disposition of the arguments raised by Appellant. Accordingly, we will adopt the Examiner's reasoning as our own in sustaining the rejections of record, and we add the following for emphasis only.

Sakumoto discloses the application of adhesive tape comprising a coverlay for bonding to an IC chip wherein the coverlay is peeled off to expose the adhesive portion of the tape, which is bonded to the chip with heating. As appreciated by the Examiner, Sakumoto is directed to the adhesive tape, per se, and is silent with respect to the type of apparatus used to apply the tape to the IC chip. However, VanNortwick describes such an apparatus for dispensing, cutting, and bonding an adhesive film to an IC chip wherein a block is displaced a first distance to cut the tape and a second distance to bond it to the chip. Accordingly, we fully concur with the

Examiner that it would have been obvious for one of ordinary skill in the art to employ an apparatus of the type disclosed by VanNortwick for applying the adhesive film of Sakumoto to an IC chip. As recognized by the Examiner, VanNortwick does not teach removing a coverlay from the adhesive strip before it is applied to the chip. However, we agree with the Examiner that Saito evidences the obviousness of employing drive and pinch rollers to remove a release liner from an adhesive strip to a semiconductor wafer. Accordingly, we find that it would have been a matter of obviousness for one of ordinary skill in the art to modify the apparatus of VanNortwick to incorporate means for removing a release liner when a tape of the type disclosed by Sakumoto is used.

Appellant emphasizes that “Sakumoto does not provide any information as to an apparatus for performing these steps or how an apparatus might be configured to perform these steps” (Br. 7, ¶1). However, Sakumoto is cited to show that it was known in the art to use an adhesive tape with a coverlay that is peeled off before the tape is cut to a definite length and then brought into contact with the lead frame of a semiconductor wafer. While Sakumoto does not disclose any details regarding the apparatus used to perform the procedure, leaving it to one of ordinary skill in the art to employ conventional apparatus, VanNortwick and Saito establish that apparatus in accordance with the appealed claims were known in the art at the time of filing the present application. While Appellant argues that Saito cuts the protective film after applying it to the surface of the wafer, VanNortwick demonstrates that it was known in the art to cut the film before application to the wafer. Similarly, while Appellant maintains that Saito “fails to teach or suggest anything concerning an adhesive-film-attachment

portion comprising a displace block” (Br. 7, last ¶), it is VanNortwick that establishes the obviousness of the displaceable block.

Appellant also argues that the combination of Sakumoto, Saito, and VanNortwick “fails to disclose that the cutting blade is situated relative to the cutting block as recited in claim 21” (Br. 8, penultimate ¶). However, it can be seen that element 82 of VanNortwick comprises a block situated relative to cutting blades 110 (see Figure 6).

Appellant also contends that “[i]f VanNortwick is considered as the starting reference, it is unclear why one skilled in the art would view VanNortwick and be motivated to include a means for separating a coverlay from an adhesive material” (Br. 9, ¶ 2). Manifestly, the requisite motivation would arise from using the cutting and bonding apparatus of VanNortwick to apply the adhesive films of Sakumoto and Saito which comprise a coverlay.

Regarding separately argued claims 22-23, which recite that the film strip covers 70–90% of the wire-bond slot, we agree with the Examiner that the claim recitation is a statement of intended use that the apparatus of VanNortwick is fully capable of performing. Appellant has not demonstrated otherwise. Manifestly, whether the film covers the wire-bond slot is a function of the size of the slot and the size of the film selected.

Appellant also argues that the piston coupled to the block of claim 35 is not taught by the prior art. However, the Examiner properly points out that VanNortwick specifically discloses a hydraulic cylinder to drive up and down the cutters and block to cut and bond the film to the wafer (VanNortwick, ¶ bridging cols. 6 and 7).

Appellant has not separately argued the separate § 103 rejection of claims 32-34.

As a final point, we note that Appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results, to rebut the prima facie case of obviousness established by the Examiner.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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